State-of-the-art technology sets Next Generation Radio Project in motion

It took two years of planning, but just two days to complete the transition of Ring 2 of E-Comm’s wireless network onto a new and improved internet-protocol (IP) based microwave system. The transition is a critical first step in the preparation for replacing the region’s current radio technology called Enhanced Digital Access Communication System (EDACS). It was first implemented by E-Comm in 1999 and is a proprietary technology that must be replaced over the next few years as it is reaching its technological end-of-life and will no longer be supported by the manufacturer.

The replacement radio network, which will be a standards-based open architecture and is scheduled to begin rolling out in 2014, will continue to provide seamless communication for responders, but will also provide the ability to connect to agencies outside the Lower Mainland.
because of its IP architecture. Equally important, it will be capable of carrying data that we anticipate will be available to responders in the future as communication technology continues to advance. That includes receiving images and video through radio handsets.

The E-Comm microwave system is designed using “ring technology” (closed loop) to ensure redundancy and resiliency for the radio network. The microwave connects 28 radio sites utilizing three rings used throughout the Lower Mainland. This is what allows users to communicate with other agencies on the network, no matter where they are. Ring 2 serves Abbotsford, Maple Ridge, Pitt Meadows, Langley, Burnaby and Port Coquitlam.

Peter Gauthier, E-Comm’s director of Wireless Services, declares this is a major milestone in the convergence of technology.

“Our Wireless staff worked hand-in-hand with our information technology specialists to make this transition to an IP-based system a success,” says Gauthier. “They all appreciate how much responders and dispatchers rely on their radios for their safety and the safety of the public.”

The Technology Services division is now working on Ring 1 (Vancouver and Richmond), with the transition to the new system slated for June. This will be followed by Ring 3 in the fall of 2012. Once complete, E-Comm’s network will support Next Generation Radio technology, a key element of Vision 2020, E-Comm’s new strategic plan.
The first few months of 2012 have been busy ones for E-Comm’s Operations’ and Technology Services teams as we moved to a new internet-protocol (IP) 9-1-1 phone system and a new radio microwave network. The new telephone technology means E-Comm is now one of only two 9-1-1 centres in Canada operating under an IP phone system that runs through a data network. The new microwave network is a necessary first step in updating the region’s current radio technology and will be the largest technical undertaking for E-Comm since we first implemented the system in 1999. We also began testing a new system that will enable hearing/speech-impaired callers to send text messages to 9-1-1 on a trial basis. These projects reflect the contributions E-Comm is making to emergency communication through technological innovation to meet the needs of the region.

In the first quarter of 2012 more than 250,000 calls were placed to 9-1-1 and our staff managed to answer 98% of those in five seconds or less. We remain focused on ensuring our target of 95% is met as part of our service quality commitment.

We’ve also been educating the public on preventing accidental calls, when to call the non-emergency line, interpretation services, along with many other messages that help to make the 9-1-1 system as efficient as possible for all partners. Emergency Service Dispatchers’ and 9-1-1 Awareness Week brought light to these issues in the media and to the dedicated work of emergency communication professionals. I am also very proud that E-Comm’s call-takers’ and dispatchers’ exceptional skills were recognized through receiving a Richmond Chamber of Commerce award in the category of Community Safety Partner Agency for their contribution to the response to an October plane crash.

In the following pages, you will also read about a key initiative for you, our stakeholders: the launch of E-Comm’s new multi-year strategic plan – Vision 2020. The Vision 2020 plan was developed through extensive consultation with our Board of Directors, shareholders, partners, employees and other key stakeholders. It will guide our organization over the next eight years as we continue to grow and innovate. This plan sets out to advance emergency communications to ensure our partners have the tools and support they need to keep communities safer.

E-Comm remains committed to building public-safety partnerships and delivering exceptional emergency communication services and I hope you will read more about the Vision 2020 plan on our website, ecomm911.ca.

David Guscott, president & CEO
Vision 2020 lays foundation for next eight years

E-Comm’s new strategic plan aims to ensure we continue to deliver exceptional emergency communication services that help save lives and protect property and advance public-safety partnerships.

Following months of planning, review and consultation with stakeholders, E-Comm’s Vision 2020 plan is now ready for unveiling to our partners and stakeholders. With public safety at the forefront, this plan maps out the next eight years as we keep up with the latest technology innovations and expand our services.

“Getting to where we need to be in 2020 is a multi-faceted challenge, so having Vision 2020 in place to help us get there is a much-needed first step,” says David Guscott, president & CEO. “This is E-Comm’s first long-term plan. Reporting back on this progress will be integral to our success.”

The five key strategic directions in the plan are:

- highly-engaged employees
- organizational effectiveness
- service excellence and collaborative partnerships
- service expansion
- public-safety communication leaders

Through service excellence and collaborative partnerships, our goal is to exceed our partners’ service-delivery expectations and build collaborative relationships that unite efforts for a safer British Columbia. As a result, partners will be highly satisfied with our service delivery and be strong advocates of E-Comm, and shareholders will continue to recognize the value of E-Comm.

The plan also sets out a goal to strategically expand our technology services and call-taking and dispatch services and to gain new business through training and consulting services. By more broadly offering our technology and dispatch services to areas or jurisdictions not currently
covered, we will enhance their ability to respond and effectively manage emergencies. At the same time, our existing agencies will reap the operational benefit of having a greater number of emergency services on common systems—an initiative that will also lead to cost efficiencies for current partners.

A number of key projects within the plan are currently underway or scheduled to begin between now and 2015, such as replacing current radio technology.

E-Comm has been contributing greatly to public safety since its inception in 1999 and has grown to become an emergency communications leader. To further advance E-Comm as a public-safety communication leader, we plan to help align public-safety communication efforts provincially and nationally, resulting in the public having confidence in E-Comm’s contributions, E-Comm having a broader role in public safety and E-Comm being regarded as an industry leader in service delivery.
9-1-1 texting trial set to begin
New technology for hearing/speech-impaired ready for testing

E-Comm is the first public-safety answer point (PSAP) in western Canada to test a new service that will allow hearing/speech-impaired callers to send text messages to 9-1-1.

E-Comm’s Technology Services team has begun testing the system with wireless service providers (TELUS, Bell and WIND) while a national working group is currently recruiting volunteers from the hearing/speech-impaired community to test the service from their cell phones.

“This new technology will be a vast improvement from the current teletypewriter (TTY) system that only works from landlines, “says Mike Webb, E-Comm’s vice-president of Technology Services. “When this pilot is complete, hearing/speech-impaired callers will be able to call 9-1-1 from anywhere on their cell phones and communicate with the call-takers.”

The Canadian Radio-television and Telecommunications Commission (CRTC) announced in February that four 9-1-1 centres in Canada (Vancouver, Montreal, Toronto and Peel) would trial 9-1-1 texting for the hearing/speech impaired. E-Comm is part of a national working group that formed in 2010 to develop the pilot project.

E-Comm worked with TELUS technicians to set up a special web-based program that can transmit text messages through phone lines for hearing/speech impaired callers. Once the technology is ready for use by the wider hearing/speech-impaired community, likely in 2013, individuals with a hearing or speech impairment will register for this designation through their wireless provider. In an emergency, they will dial 9-1-1 as usual and a special code will appear on the call-taker’s screen as an alert that the caller has a hearing or speech impairment. Then the call-taker will initiate the web-based program that will allow them to quickly send messages to the caller (e.g. do you want police, fire or ambulance?) and dialogue will then continue via texting. The call-taker will conference in the police or fire agency on the phone line and translate between the hearing/speech impaired text messaging and the voice path to the agency.

In 2006, 2.9% of the population in BC aged 15-64 reported having a hearing limitation and 1.7% had a speech limitation, according to Statistics Canada.
E-Comm has received a Richmond Chamber of Commerce 9-1-1 Award in the category of Community Safety Partner Agency for our staff’s coordinated efforts after a plane crashed near the Vancouver International Airport in October.

President and CEO David Guscott and staff representatives accepted the award on E-Comm’s behalf at an April 12 awards gala in Richmond and had the opportunity to meet one of the passengers who survived the plane crash.

When Flight 204 crashed onto Russ Baker Way just after 4 p.m. on October 27, the highly-visible event generated 194 calls to E-Comm 9-1-1’s consolidated communications centre in less than 20 minutes. A coordinated response led by Richmond Fire-Rescue, Richmond RCMP and BC Ambulance Service, with the support of E-Comm Team 3/4’s call-takers, dispatchers and report agents for Richmond RCMP and Richmond Fire-Rescue followed. E-Comm’s team demonstrated exceptional teamwork and professionalism throughout the event as they handled an influx of 9-1-1 calls and an increased volume of traffic on E-Comm’s Wide-Area Radio Network.

“This award recognizes the commitment and skill our staff demonstrate every day when responding to emergency situations to keep the public and emergency responders safe,” says Guscott.
9-1-1 Awareness Week focuses on accidental call prevention

E-Comm celebrated Emergency Service Dispatchers’ and 9-1-1 Awareness Week in British Columbia April 9 to 16 by recognizing staff and educating the public through the media about the problem of accidental 9-1-1 calls tying up emergency resources.

Based on a recent analysis of call statistics, E-Comm found that more than 100,000 calls were made to 9-1-1 by accident within Metro Vancouver and surrounding areas in 2011, diverting valuable public-safety resources away from real emergency calls. Ten per cent of the more than one-million 9-1-1 calls E-Comm received in 2011 were dialed by mistake. E-Comm estimates more than 70,000 of those calls (200 per day) were “pocket dials” (inadvertent calls from cell phones) and 40,000 more were “abandoned” calls (hang-ups).

In 2011, 58 per cent of E-Comm’s 9-1-1 call volume came from cell phones, an all-time high and up 10 per cent in just four years. The increased use of wireless devices has also resulted in a rise in pocket dials. They happen when phones are stored in pockets, purses and backpacks without protective cases or when 9-1-1 is programmed into phones.

“Ridge Meadows RCMP is very proud of our relationship with E-Comm 9-1-1 and we wanted to take this opportunity to say thank you for the work you do keeping our community and our police officers safe.”

Insp. D.J. Fleugel,
Ridge Meadows RCMP
“The service we have received from E-Comm over the past 8 years has been first-rate and we will continue to foster a solid working relationship between our two agencies—understanding and respecting the importance of our mutual cooperation in serving the community of Delta.”

Chief Dan Copeland,  
Delta Fire & Emergency Services

“I’ve had a lot of calls from Rogers Arena when the Canucks were playing,” said Corey Kelso, 9-1-1 call-taker. “I’ve heard pucks drop, I’ve heard the announcements, and I’ve actually heard Richard Loney singing the national anthem.”

“The safety of the public and first responders is our priority,” says Doug Watson, E-Comm’s vice-president of 9-1-1 Operations. “In addition to our education efforts, we’d like to see cell phone manufacturers and telecommunications industry groups try to ensure better safeguards are put in place on phones to prevent pocket dials to 9-1-1 in the first place.”

The aim of Emergency Service Dispatchers’ and 9-1-1 Awareness Week is to educate the public about calling 9-1-1 and to recognize the dedicated work of emergency call-takers, dispatchers, technology specialists and support personnel. View all the media coverage from the week on ecomm911.ca.

E-Comm is asking the public to “help us help” by using keylocks, storing cell phones in protective cases and to not pre-program 9-1-1 into any phone. If 9-1-1 is dialed by mistake, the centre reinforces that callers should stay on the line and speak with the call-taker. When callers hang up, staff will call back to ensure the caller is safe, tying up more resources and in the case of hang-ups from landlines, dispatching police.

E-Comm’s call-takers have pretty much heard it all through pocket dialing.

“Richmond RCMP values the partnership between us that has grown over the years, as we all strive to be leaders in the area of public safety... I want you to know that it is due to the hard work and dedication of your staff that our members are able to be effective in the execution of their duties.”

Supt. Rendall Nesset,  
Richmond RCMP
New phone system to improve resiliency of 9-1-1 service

E-Comm is now one of the first 9-1-1 centres in Canada operating under an internet-protocol (IP) phone system that runs through a data network, allowing for increased resiliency, functionality and mobility of telephone service. The upgrade to the IP system in February was the single largest project involving E-Comm’s 9-1-1 phone system since it first started answering 9-1-1 calls in 1999.

Since the phone communications now occur over the data network, there will be more flexibility and functionality for the telephone sets. The old phones were physically connected to the phone system infrastructure in the E-Comm building, while the new phones are connected through a virtual data network, which means individual telephones can be more mobile and can travel with the network, such as to E-Comm’s back-up facility, explains Naomi Arita, E-Comm’s manager, 9-1-1 and technology service delivery. This improvement will also enable unified communication between the phones and computers in the same network to exchange information such as voice-to-text and computer-based telephones (or soft phones).

The switchover to an IP phone network is a positive step towards Next Generation 9-1-1, a North American-wide initiative to update the 9-1-1 infrastructure, eventually leading to a number of new capabilities including 9-1-1 callers being able to transmit photos and videos to emergency services. E-Comm completed the switchover to the new phone system in one day on Feb. 26 with no interruption to 9-1-1 service.

“Each member of the Technology Services and Operations teams contributed to bringing E-Comm and 9-1-1 services to current state technologies and a step in the right direction for Next Generation 9-1-1,” says Arita. “The team’s commitment and focus on ensuring a stable and reliable system for public safety was always at the forefront.”
E-Comm in the community

Mascot in St. Patrick’s Day parade
E-Comm’s 9-1-1 ambassador, ALI (named after the ANI/ALI system call-takers use to identify caller’s phone number and location), appeared in the St. Patrick’s Day parade in March in downtown Vancouver. ALI joined his Vancouver police mascot friends, “Luke Left-and-Right” and Cst. Chip, and handed out 9-1-1 education stickers to children.

Diversity Health Fair
E-Comm hosted a booth and distributed 9-1-1 education materials at the AMSSA (Affiliation of Multicultural Societies and Services Agencies of BC) Diversity Health Fair in March, which brought together thousands of members of multi-ethnic communities and health and social service agencies in the Lower Mainland.

Vancouver AM tourism association
Members of the Vancouver AM tourism association held their bimonthly meeting at E-Comm on February 10, where they learned 9-1-1 tips to pass on to tourists they work with through their businesses, namely knowing your location and that E-Comm has interpretation services available.

Variety Show of Hearts telethon
Six of E-Comm’s Operations staff volunteered their time on February 12 to answer donation calls at the Variety Show of Hearts telethon fundraiser. The funds raised are distributed to families and organizations throughout the province to inspire hope, enrich lives and build a better future for children who have special needs.

Stairclimb for Clean Air
E-Comm’s Team Fire Dispatch joined the Stairclimb for Clean Air in February, climbing 48 storeys at the Sheraton Wall Centre in Vancouver and raising more than $1,500 for the BC Lung Association.
E-Comm service by the numbers
January - March 2012

9-1-1- service levels

<table>
<thead>
<tr>
<th>9-1-1 calls placed to E-Comm</th>
<th>Service level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>January – March</td>
<td>255,297</td>
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* Service Level Target: 95% of all 9-1-1 calls answered in five seconds or less.

Number of 9-1-1 calls from landlines and cell phones

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<thead>
<tr>
<th></th>
<th>Landline Telephones</th>
<th>Cellular Telephones</th>
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<tr>
<td>January – March</td>
<td>108,663</td>
<td>43%</td>
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</tbody>
</table>

9-1-1 call directed to police, fire and ambulance

Technology

9-1-1 uptime: 100%

System grade of service and availability*

<table>
<thead>
<tr>
<th></th>
<th>System air time (secs)</th>
<th>Transmissions (#)</th>
<th>System availability avg.</th>
<th>System grade of service avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 January – March</td>
<td>119,599,686</td>
<td>30,829,470</td>
<td>99.9992%</td>
<td>0.033%</td>
</tr>
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* Grade of service represents the ability of the radio system to handle radio traffic volume. Industry Canada sets the standard for the public safety community, which is 3%. This means at the radio system's busiest times, there cannot be more than 3% queuing (responders waiting to speak). The E-Comm radio system is well within this standard.

E-Comm mission
To deliver exceptional emergency communication services that help save lives and protect property, and to advance public-safety partnerships.

E-Comm values
Respect, Accountability, Integrity, Service, Collaboration

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